Rock Raiders Desktop and Interface Design Document

Revision 1.1
2nd March 1998

This document contains three separate sections. The first section is an overview of the desktop and each element's functionality. The second section is the desktop in detail, and the third section describes the user interface.

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Proposed Desktop Design and Interface Functions
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To: LEGO Rock Raiders Team
March 2, 1998

The whole team has proposed that the LEGO Rock Raiders desktop and mouse functionality should be made as clear and simple as possible. With your requests in mind I have put together the following document which outlines these two subjects in more detail. This is by no means a final document and I am very much open to new ideas on style and implementation of the user interface.

Section 1: Desktop 'At a Glance' Overview
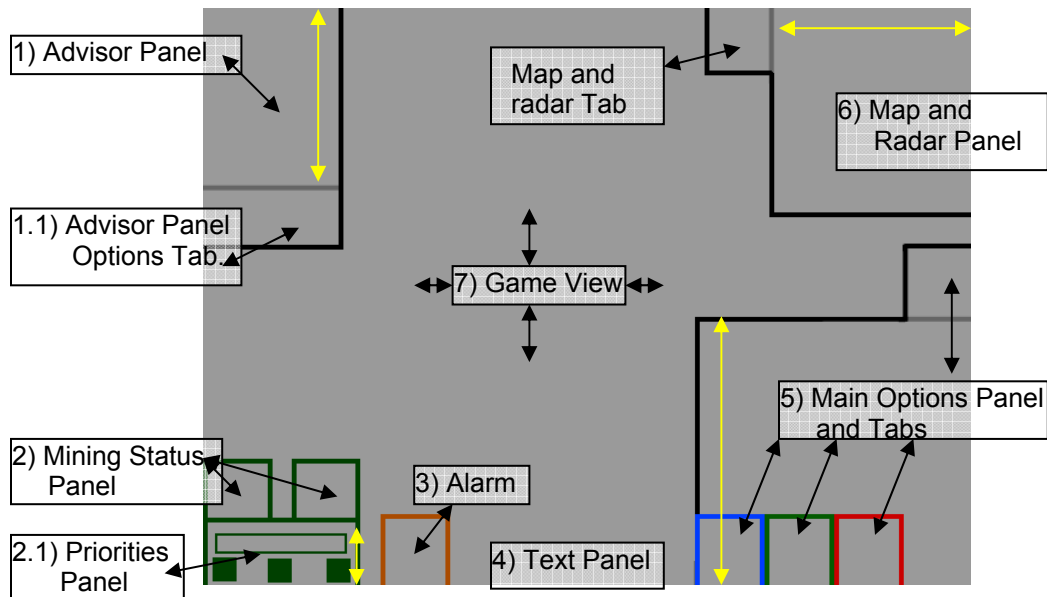
The Desktop
Screen Overview
Fig.1

The example above was provided by Sim, and contains many of the features that will be necessary in the final version. The example is based on a 640x480 screen size and uses sliding tabs to show/hide other features.

Below is a breakdown of the desktop layout. The information concerning each area is given as a basic definition rather than a detailed description of exact functionality. More detailed information is given later in this document.

Fig. 2

1) **Advisor Panel**
The 'Advisor' is the Captain of the LMS Explorer and can be called in for help at any time during the game. His holographic image is displayed on the desktop as he gives help and advice from the ship currently orbiting the planet. This panel is hidden until the player requests information by clicking on the 'Advisor Panel Options Tab'. (see 1.1.)

1.1) **Advisor Panel Options Tab**
This section is always visible on screen and can be used to activate the Advisor Panel. It contains three buttons:
- Open communications;
- Repeat the mission objective;
- End communications.

2) **Mining Status Panel**
This panel is always visible. It shows the amount of crystals and ore that have been mined and processed on the level. Clicking on either of these will then bring up the 'Priorities Panel' (2.1) or hide it, if it is currently visible.

2.1) **Priorities Panel**
During the game it will be possible to give your mini-figures 'priorities' over what they should do if they are not busy or under the direct control of the player. The three options will be:
- Mine Crystals;
- Mine Ore;
- Reinforce walls or repair buildings (dependant on the mini-figures' location, i.e. mini-figures should not travel from one side of the map to the other when there are tunnels to reinforce or repair nearby.).
A textual description of the current priority setting is displayed in the box above the three icons.

3) **The Alarm**
The Alarm is a device that provides advance warning of danger and enables the player to snap immediately to the source. The Alarm is discussed in section two 'Desktop and Interface in Detail'.

The alarm also works in conjunction with the 'Text Panel'. (4).

4) **Text Panel**
The 'Text Panel' is a very useful area of the screen and informs the player of the completion of various tasks and also the nature of any alarm.
Examples of Messages would be:
- Mission Complete
- Building Teleport Complete
- Unit Teleport Complete
- Base Under Attack
- Danger! Tunnel Collapse
- Unit Teleported Back to Ship
- Message From Captain *(prompt for 'advisor panel': new mission objective for example)*

5) **Main Options Panel**
The 'Main Options Panel' is where most of the players' decisions are made. There are four sections or icon tabs:
- Build (Teleport new building or Unit from the ship).
- Sell (Teleport selected building or unit back to the ship).
- Change View (Toggles between 1st and 3rd person perspectives).
- Options.

6) **Map and Radar Panel**
This is another feature that requires the existence of a communications centre. Clicking on the radar tab slides the radar in and out of the game view area. The usefulness of the radar increases as the player upgrades their communications centre. (Full details on the ensuing pages.).

7) **Game View**
The 'Game View' takes up the full 640x480 screen as denoted by the grey area (Fig. 2). Both 1st and 3rd person perspective views are displayed in this window.

Rock Raiders Desktop and Interface Design Document
Section Two
Desktop and Interface in Detail

Section 2: Desktop and Interface Design in Detail

(Readers note: any type in black is a general description of how each element operates; any type in green is a description as to the nature of each element and possible routines to consider)

1) Advisor Panel

The 'Advisor Panel' consists of a drop down portal that displays pre-rendered sequences and sound effects.

The panel contains the holographic image of the Captain of the LMS Explorer, which is projected from the bridge of the ship itself.

The Advisor can be accessed at any point during a level to gain information concerning any unit, vehicle or building. However, he will not be able to relay information concerning your enemies: only objects selectable by the player. The panel is hidden during normal play and can be accessed using the 'Advisor Panel Options Tab' consisting of the three buttons at the base.

1.1) Advisor Panel Options Tab

The 'Advisor Panel Options Tab' is always visible on the screen and consists of three brightly coloured buttons animated by sprite overlay induced by a left mouse click.

Icons are still to be designed that are not only larger but also in keeping with the 'chunky metal' style desktop suggested by Tom Gillo at LEGO Media. The colours are also not yet representative of their function, although they do follow the LEGO colour scheme.

Current functions will be:
RED (left button):
> Access Advisor Panel (reveal 'Advisor Panel' if hidden)
> Left-clicking this button will reveal/hide the Advisor Panel (1). Unless there is information to be received, the Captain will not appear in the portal.
> Gain Information on the currently selected unit (reveal if hidden)
> Once a unit is selected, by left clicking on it in the 'Game View' portal (7), the player can then left-click on the 'Access' button to hear a brief description of the unit or building.

> *(Note: Change colour of the icon (from red see above illustration) to green for 'GO'.)*

GREEN (middle button):
> Access Mission Update
> This button will flash when there is new information such as a change in the mission objective or a new secondary objective. Left-Clicking this button will activate the drop down panel and play the animation and sound effect.

> Restate Current Mission (reveal 'Advisor Panel' if hidden)
> Left-clicking this button at any point during the level will bring down the 'Advisor Panel' and play a pre-rendered animation and sound effect describing the current objective. Once finished, the 'Advisor Panel' slides back out of the 'Game View Portal (7)'.

> *(Note: Change colour of the icon (from green see above illustration) to blue.)*

BLUE (right button):

> End Communication Stop Animation
> Left-clicking this button will immediately play the 'End Communication' animation in the portal. It can be activated at any time while an animation is running. Once the Advisor has gone the 'Advisor Panel (1)' slides out of the 'Game View Portal (7)' and leaves the 'Advisor Panel Options Tab (1.1)' in view.

> *(Note: Change colour of the icon (from blue see illustration on previous page) to red for STOP.)*

<u>IMPORTANT:</u> *The messages are also displayed in text format in the 'Text Panel (4)'. The text is displayed scrolling from right to left.*

2) <u>Mining Status Panel</u>

The 'Mining Status Panel' contains two icons: one for 'Power Crystals' and another for 'Ore'. Next to each icon is a number that describes how much of each has currently been mined and refined.

The number should only represent Power Crystals or Ore that have been deposited in the base refinery and should <u>not</u> include:
- The total amount of each on the level;
- Any that have been uncovered;
- Any being carried by a mini-figure or vehicle.

Left-clicking on either of these icons will also show/hide the 'Priorities Panel (2.1)'

2.1) <u>Priorities Panel</u>

This panel is accessed by left-clicking the 'Mining Status Panel (2)'. The panel itself contains three sprite-animated icons and a portal for scrolling text.

The 'Priorities Panel' can be used to set the current priority for your mini-figures and vehicles. The three priorities to choose from are:
- Mine Power Crystals
- Mine 'Ore'
- Repair Buildings/ Reinforce Tunnels

Left clicking on any of these icons would cause a graphical change such as a halo effect or a scale effect or both to that particular icon. Also, scrolling text in the 'Priorities Panel' text portal would be a second confirmation of the current priority. The reason for right to left scrolling is to allow for the various translations without having to scale the text, which may cause it to become unclear in some languages.

Left clicking on any highlighted icon effectively switches off the priority, returning the mini-figures and units to evenly distributed tasks.

Left clicking on the 'Mining Status Panel (2)' closes the 'Priorities Panel (2.1)'.

<u>NOTE</u>: *It has been suggested that these three icons could be stacked vertically, and clicking on either the middle or bottom icon puts that priority to the top of the 'stack'. Whichever is then at the top, has the highest priority. This works well in games such as 'Populous'. However, we should consider if selecting just one at a time would be simpler to understand considering our target audience of 8 to 12.*

3) The Alarm

Below are several suggestions as to how the Alarm might function. The final decision will be made after discussion by the whole Rock Raiders team.

'The Alarm' is only present when the player has constructed a communications centre. When the players' base or a group of units is attacked by one of the many creatures; or there is an imminent cave-in, the alarm flashes for a couple of seconds. The player can then click the alarm icon and be immediately transported to the action. If the player is currently busy the alarm can be ignored but the position saved for a limited time so that they can go and see if there is anything left to salvage when they are ready.

It has been correctly pointed out that several events could happen simultaneously or over a few seconds. There has to be some way of prioritising events and describing them. The players should decide for themselves to what they give priority. Therefore, as game designers, it would be better to describe the nature of the alarm. One way to do this would be to create icons for: 'Base Under Attack'; 'Vehicle Under Attack'; 'Mini-figure Under Attack' and 'Cave In' (see Populous). Then each would appear next to the Alarm for 5 seconds. If a second event of the same nature occurs within five seconds then the most recent location would take priority.

Another option would be to not describe the nature of the alarm at all and leave it up to the player to check against the radar and decide for themselves where the problem is most likely to be. If the player is wary and uses 'tagged camera views' (see 6.4.3 p.15), intelligently there will be no need to constantly flash the Alarm when a dangerous event occurs. This would mean that the Alarm would only be used as a cave-in warning as it is the only event that is not described on the map/radar panel. (Personally, I feel this would be the best use.)

The final option would be to not include the Alarm at all or at least have it as a toggled option. This would mean that the youngest of the age range would benefit from an obvious indication of trouble and the older or more experienced player's would not be irritated by a possible interrupt to the gameplay.

The 'Alarm' is activated by the computer. Once activated there will be an animation of the light flashing and a sound effect. The player will be able to utilise the alarm by left clicking over the icon.

This feature also works in conjunction with the 'Text Panel (4)', which displays the nature of the alarm.

If the player decides to go to the area currently in danger, they can do so by left clicking on the 'Alarm' icon. They can of course choose to ignore the alarm and continue with their current task.

4) The Text Panel

The 'Text Panel' is a portal containing text scrolling from right to left.

As previously mentioned this panel works in conjunction with the 'Advisor Panel' and also the 'Alarm'. It also conveys messages concerning the players' current status. Such messages would include:

- Mission Complete.
- Construction Complete.
- Teleport Complete.
- Unit Upgraded!
- Building Upgraded!
- Not enough crystals to teleport
- Not enough 'ore' for construction
- Building Teleport Complete
- Unit Teleport Complete
- Base Under Attack
- Danger! Tunnel Collapse
- Message From Captain *(prompt for 'advisor panel': new mission objective for example)*

There may also be a button to toggle these messages on or off. (Game testing will prevail.)
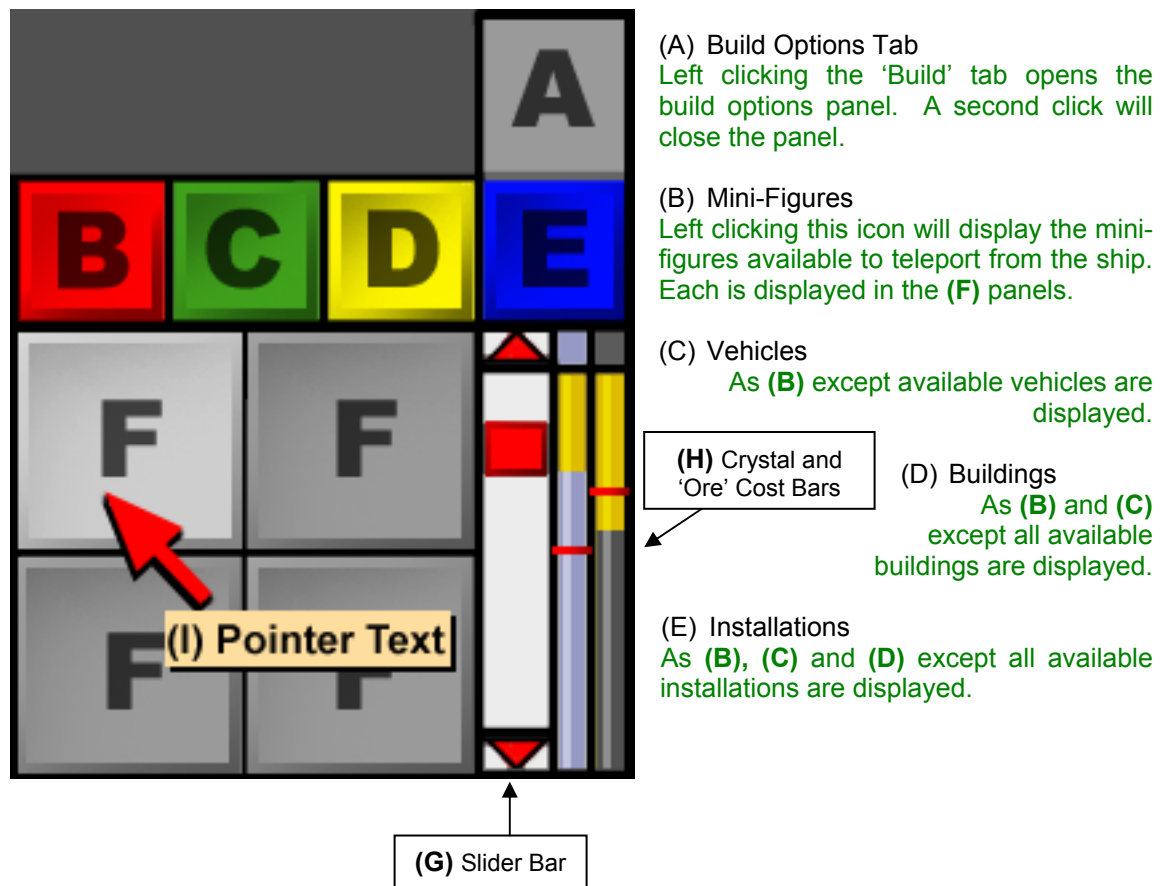
5) Main Options Panel

The 'Main Options Panel' is where most of the players' decisions are made. There are four sections or icon tabs:
- Build (Teleport new building or Unit from the ship).
- Sell (Teleport selected building or unit back to the ship).
- Change View (Toggles between 1st and 3rd person perspectives).
- Options.
- Zoom.

All of the above icons with the exception of 'Change View' contain a sliding panel containing further options. 'Change View' is a toggle option switching between 1st and 3rd person perspectives. All of the options are activated by a left mouse click.

5.1) Build
There are many ways that the overall panel could operate. The following is one solution with respect to our target audience. The diagram depicts a simple overview of the relevant sections and layout; it is not intended to be a final artwork representation

(A) Build Options Tab
Left clicking the 'Build' tab opens the build options panel. A second click will close the panel.

(B) Mini-Figures
Left clicking this icon will display the mini-figures available to teleport from the ship. Each is displayed in the **(F)** panels.

(C) Vehicles
As **(B)** except available vehicles are displayed.

(H) Crystal and 'Ore' Cost Bars

(D) Buildings
As **(B)** and **(C)** except all available buildings are displayed.

(E) Installations
As **(B), (C)** and **(D)** except all available installations are displayed.

(G) Slider Bar

These would include base defences, remote geological units, temporary docks and fences.

(NB. It may be desirable to incorporate these items within the 'Buildings' section.)

(F) Object Display Panels
These panels display items currently available to teleport from the 'Explorer' down to the current level. Each becomes highlighted when the mouse pointer goes over them. A left mouse click is used to select an item, which causes a 'button depressed' sprite to be printed over the original.

These panels also work in conjunction with the 'Crystal and 'Ore' Cost Bars' (H), and the 'Pointer Text' (I). When the mouse pointer travels over an item it will become highlighted if the player has enough 'Ore' to build it and enough 'Power Crystals' with which to power the vehicle and teleport it from the Explorer. For further information see 'Crystal and 'Ore' Cost Bars' (H).

(G) Slider Bar
The 'Slider Bar' operates in the same way as one used in a Windows style operating system. It is used to scroll up and down through the 'Object Display Panels' (D).

(H) Crystal and 'Ore' Cost Bars
This panel is the only one that is not affected by the player. It consists of five sprites spread over three layers. These are:
Layer 1 (Background): Background bars sprite including icons at top
Layer 2 (Middle): Current 'refined' and Current ore refined bar
Layer 3 (Foremost): Power Crystal Cost pointer and Ore Cost Pointer.

The 'Crystal and 'Ore' Cost Bars' display two things. Firstly it displays the amount of 'Power Crystals' and 'Ore' currently refined *(see section 2 Mining Status Panel, page 5)* and also the amount of each required to teleport that item to the level.

The two red bars show the cost of the unit to bring to the level.

The pale blue bar (left) shows the amount of Power Crystals currently refined and the dark grey bar (right) shows the amount of 'Ore' currently refined.

In this example the player would not be able to teleport this item from the Explorer as they do not have enough 'Ore', although they do have enough Power Crystals.

In this way the player has a very graphical representation of what is needed to create each specific item.

This panel also works in conjunction with the Text Panel (4) p.9. In this example the message would be "Not Enough Ore."

Data is shared between these bars and the 'Mining Status Panel (2)', p.8.

(I) Pointer Text (or ToolTips)
This pointer utilises a Windows (TM) style dialogue box, which is attached to the mouse pointer. Holding the mouse over any icon for a few seconds will give a textual explanation of the icon.

This function is not limited to the 'Build Panel' and should be utilised throughout the desktop for every icon and function.

Older and more experienced players may wish not to use this function. The ToolTips ON/OFF setting will be placed within the 'Options Panel'.

5.2) <u>Options Panel</u>

The 'Options Panel' contains all the in-game options and operates in the same way as the 'Build Panel' (5.1) p.10.

Options contained will include:
- LOAD GAME
    This then takes you to the saved game slots. A game is selected with the left mouse button. A YES/NO check box is then printed to confirm or decline load game.
- SAVE GAME
    With the left mouse button the player will either select a blank slot or choose a previously used slot. A YES/NO check box is then printed to confirm or decline save game in current slot.
- SOUND OPTIONS
    Music ON/OFF, music volume, SFX volume etc.
- DESKTOP OPTIONS
    Mouse Pointer Text ON/OFF, Show all text in Text Panel ON/OFF, etc.

- QUIT
    End Game and Return to Main menu.

There are other options that will be displayed entirely on one of the pre-game options screens. They have been included here to cover most of the possible options to consider.

- VIDEO OPTIONS
    Screen size, 3DFX ON/OFF, Open-GL ON/OFF, etc.
- NETWORK GAME
    Start Network game, Join Network Game, Configure Network, Configure Network Game, etc.
- CUSTOMISE CONTROLS
Set functions for mouse and keyboard.

5.3) <u>View Toggle</u>
This icon has no sliding panel and is located on the desktop at all times.
Left clicking this icon snaps between first and third perspectives.

By left clicking on the view toggle icon the mouse pointer changes to the 'View Change' pointer. As the pointer moves over an item on the screen that the player can snap to a 1st person perspective view of, the mouse pointer changes to 'View-OK' or a generic 'OK' pointer. Left clicking the left mouse button over this item will activates its 1st person perspective camera view.

When the 'View Change' pointer is activated' any selections that the player has previously made are automatically cleared. The reason for this is that the player may want to snap to and from a particular unit simply by clicking on the View Change icon. If the player still has multiple units selected when they return from 1st person back to 3rd, there may be confusion over which unit to go back to when the View Toggle icon is clicked again in 3rd person. Otherwise, if retaining selections is more vital, the player would have to continually 'pick up' the view change mouse pointer and directly select the vehicle each time.

When the player is in 1st person perspective, they can return to 3rd person perspective at any point by left clicking on the 'View Toggle' icon. The mini-figure or vehicle will remain selected unless the player decides to deselect it.

5.4) <u>Sell/Teleport</u>
This icon has no sliding panel and is located on the desktop at all times.
This icon is used when the player wishes to teleport a unit, building or installation back to the ship. In this way the player will be able to:

- Lower the overall power consumption of their base;
- Re-use their LEGO pieces to create a more useful item for their current mission;
- Save an item from being attacked by a creature (this is a last resort, as it will take power and LEGO pieces to teleport them back again.).

This icon works in the same way as the 'View Toggle' icon (5.3). By left clicking on the teleport icon the mouse pointer changes to the teleport pointer. As the pointer moves over an item on the screen that the player can teleport back to the 'Explorer' the mouse pointer changes to 'Teleport-OK'. Left clicking the left mouse button over this item will activates its teleport animation.

The player will then be debited for 'Power Crystals' (power taken to teleport) and credited for 'Ore' (LEGO pieces can now be used to build something else. Both of these changes will be displayed in the 'Mining Status Panel (2)' p.8.).

To avoid any confusion when selecting items to teleport back to the ship, the player will only be able to teleport one unit at a time. If the player has multiple units selected, clicking on the 'Teleport' icon will clear any selection.

5.5) <u>Zoom Icon</u>
The zoom icon is permanently visible on the desktop and can be used by the player to select the zoom level of the 3rd person perspective Game View (7). The icon will be defined by a magnifying glass accompanied by a plus and minus symbol denoting zoom in and zoom out respectively.

6) **The Map and Radar**

The Map and Radar panel is one of the most important items on the desktop. It is here that the player keeps track of the level, their progress and the location of collectibles, creatures and the best way to get to them.   The usefulness of the radar is directly dependent on the upgrade level of the Communications Centre of which there are currently three. In other words, the more that the player upgrades their Communications Centre, the more information will be displayed on the map/radar. The following illustrations show an overview of how the radar should operate and what should be visible on it. It is not intended to represent the final in-game graphics.
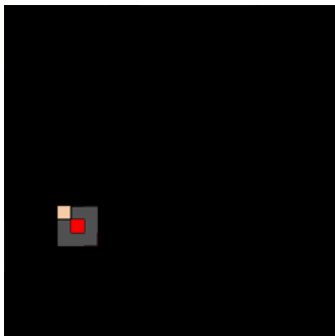
6.1 <u>First View</u>
As you can see the radar is blacked out apart from the red block and the eight blocks adjacent to it. The red block represents a building; the dark grey represents a completed tunnel and the light brown a type of rock as yet not drilled.
This is how the radar might look at the very beginning of a level, before the player has completed any exploration.
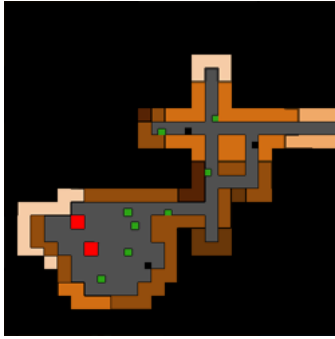
6.2 Second View

The player has now had time to teleport a few more units (green) and creates another building (red). The small black squares within the tunnel represent enemy creatures although not their exact nature; it could be a Slimy Slug or a Rock Monster.

The blocks immediately adjacent to the tunnels are also uncovered and the various types of rock are now visible and denoted in this example by five shades of brown.

6.3 Third View

In this illustration, the player has created another building. For the purposes of this example, we shall say that it represents a level three Communications Centre. A large radius is uncovered around the building displaying all the possible information: Yellow = Ore; White = Power Crystals; Orange = Lava; Blue = Water.

With the creation of the Communications Centre, the level and the objectives become far clearer.

The various upgrade levels and what is visible on the radar will be explained later.

6.4 Fourth View

We have mentioned remote geological units before in other documents. Here you can see one in action at the upper most point of the tunnel system. Smaller and cheaper then a full Communications Centre, these remote units have three very useful functions:

1. They can scan a small radius around them giving the player information about the nearby rock strata.

2. They also act as remote teleport units: All units initially arrive at the base, however as the player progresses across the level it may become tedious to tell mini-figures or vehicles to make their way across an entire level. The exact process will not be described in detail here, suffice to say that the player will be able to teleport units from the base to one of the remote units. However, teleportation uses up precious Power Crystals so the player will have to think carefully over which units are sent and where.

3. The third use is, as yet, only a suggestion: One of the advantages of using 'cameras' in our 3D world is that we can use another camera to see a second simultaneous view. We can use this view to 'tag' an object thus giving the player a second view of the world centred on the 'tagged' object. Remote geological units could provide the player with a useful target on which to centre a second camera. When the Communications Centre has reached a suitable upgrade level it would then be possible to 'tag' any mini-figure, vehicle or building. This would then provide the game with another worthwhile element that would encourage the player to build and upgrade their Communications Centre.

As you can see from this brief description the map/radar panel is an essential part of not just the desktop, but also the gameplay.

There are several ways in which the radar can be created. One suggestion is to create the permanent features such as the rock types on a bitmap. The tunnels, lava, water, ore, crystals, buildings, units and creatures would then be printed over the top.

The second way would be to print all the data directly from the code.

As the engine itself is created from blocks then this data could also be used to generate the map/radar view.

Map Zoom
Icons placed at the base of the map would allow the player to zoom the map view in and out without affecting the current zoom level of the Game View (7).

Map Location Snap
Left clicking a context sensitive mouse pointer over any point on the map/radar panel executes this feature. In this way the player is able to move to any point on the level quickly and easily.

Again, as the map and engine are both sharing the same basic block data this process should be very simple as each block on the map refers to a specific block in the Game View (7) upon which the new camera view is centred.

7) **The Game View**
The 'Game View' is the primary portal displaying both 1st and 3rd person perspective views. It is here that the player selects and moves unit's, creates buildings and installations to name but a few of the many functions available.

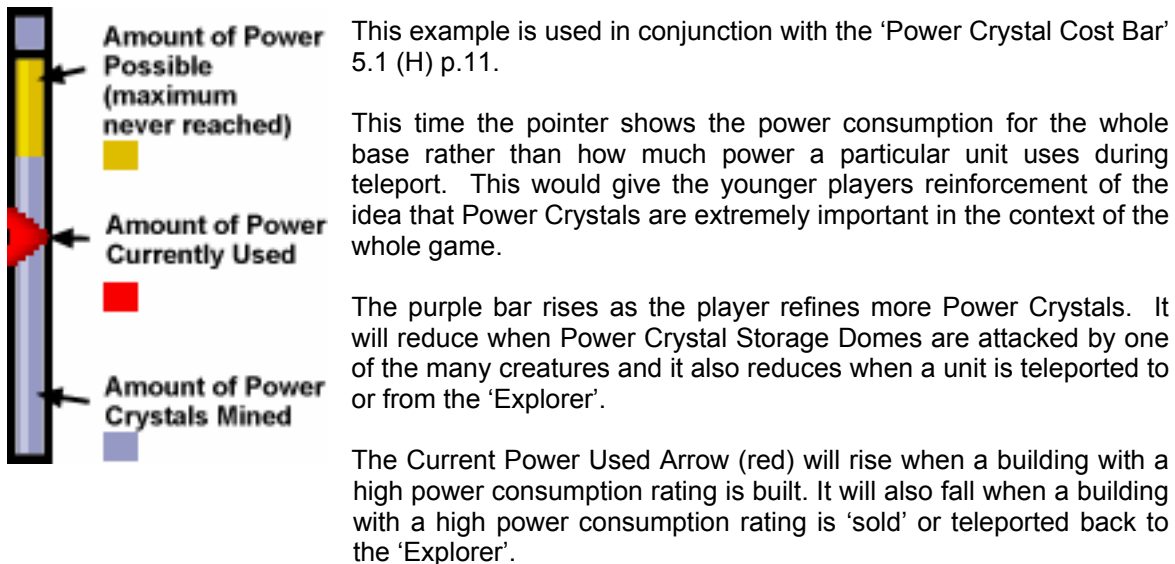## Additional items which could be added to the desktop

Base Power Consumption Meter

As the player creates more and more buildings the base will consume more power. If the amount of power being used is greater than the amount of Power Crystals currently mined then certain buildings will begin to function at a fraction of their normal capacity. For example the Communications building will not be able to display the radar and the Teleport for new units will not work. Therefore the player will have to mine more Power Crystals in order to cope with more and more units and buildings.

A good way to keep the player informed of the overall status of their base would be to put some form of graphical description on the desktop.

There are many ways of doing this here are three possibilities:

1. Power Status Bar

This example is used in conjunction with the 'Power Crystal Cost Bar' 5.1 (H) p.11.

This time the pointer shows the power consumption for the whole base rather than how much power a particular unit uses during teleport. This would give the younger players reinforcement of the idea that Power Crystals are extremely important in the context of the whole game.

The purple bar rises as the player refines more Power Crystals. It will reduce when Power Crystal Storage Domes are attacked by one of the many creatures and it also reduces when a unit is teleported to or from the 'Explorer'.

The Current Power Used Arrow (red) will rise when a building with a high power consumption rating is built. It will also fall when a building with a high power consumption rating is 'sold' or teleported back to the 'Explorer'.

As you can see, Power Crystals and how the player uses them become very important when deciding what to do next. I feel that the 'Power Status Bar' would probably be the most useful way of relaying this information.
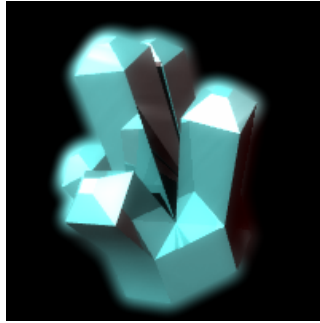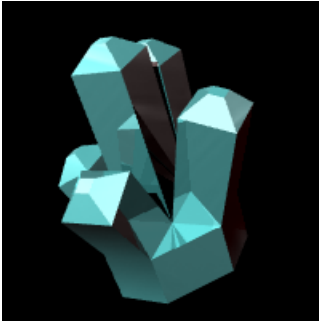
2. The Light Bulb
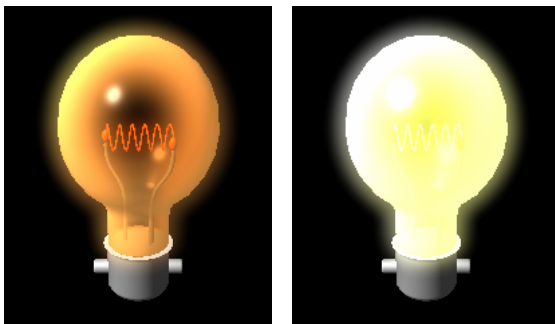
Not as accurate as the Power Status Bar, the light bulb provides the younger player with a more obvious perspective of power. The illustrations depict low and high power levels, there would be other stages, perhaps six from no power to full power. The only concern with these is whether the young player would associate a light bulb with the actual base itself. Also, it is not clear that the full potential has not been reached.

3. The Power Crystal

The Power Crystal would work in the same way as the Light Bulb on the previous page. However, there is a far stronger tie with the Rock Raiders theme in this example. Again, these images would not be as accurate as the Power Status Bar and it does not show how the power consumption of the overall base ties with the overall number of refined Power Crystals.

In conclusion, it may be preferable to use the Power Status Bar and leave examples 2 and 3 as supplementary graphics or to not include them at all. Certainly a matter to be discussed by the team.

Rock Raiders Desktop and Interface Design Document
Section Three
The User Interface Overview

Introduction

As many will appreciate the 'User Interface' is one of the most important single gameplay elements that will be involved in LEGO Rock Raiders. We have an interesting situation in that the game is essentially a resource management style game with as many features as Conquest Earth, C&C and Dungeon Keeper. However, the game must be instantly accessible and playable to a child as young as eight.

As you will see this has had a direct effect on the User Interface Design with emphasis placed on instant usability and clarity. One of the major elements in achieving an effective and informative interface is the use of context sensitive mouse pointers and Windows style 'ToolTips'.

I envisage the whole interface design to be a fluid process encompassing further ideas from the team and ideas taken from play testing. The following is intended to be a starting point.

User Interface Design Overview

1. Context Sensitive Mouse Pointers

All of the mouse pointers in LEGO Rock Raiders will be context sensitive. This means that the mouse pointer will interact with the player and the 3D world. For example if the player left clicks on the 'Change View' icon, the mouse pointer changes from the generic arrow into a camera. When the new pointer goes over a vehicle that they can use for a 1st person view, the mouse pointer changes again to show that the View Change option is now available. The player will be able to cancel the current mouse pointer function by clicking with the right mouse button. This will return the mouse pointer to the generic arrow. The result is that the player, through an intuitive interface, is informed of the current mouse function in a very clear and fun way.

2. Mouse Pointer Text or 'ToolTips'

Mouse Pointer Text is a helpful tool which can be toggled on or off in the Desktop Options Panel (5.2) p.12. The player can gain a textual description of any item or object simply by moving the mouse pointer over it and pausing for a short time. An example of what this will look like can be seen in the diagram on p.10 of this document. In the example given above concerning context sensitive mouse pointers, if the player moved their mouse pointer over the icon and held it there for a short time, then a dialog box saying "View Change" would appear next to the pointer in the player's chosen language. The dialog box is cleared as soon as the player moves the mouse.

3. Using icons

All the icons will respond to a single left mouse click. Even if the icon corresponds to a function that is not currently available, there will always be some form of acknowledgement of the player's action. Acknowledgement will be made either through the use of a graphic, a sound effect or both. The method for icon selection will be 'point and click' see 4.1 below.

4. Selecting Units and Buildings

All selection will be done with the use of the left mouse button. There will be two methods of selection, these are:

- Point and click
- Click and drag

Both these methods take place within the Game View (7).

4.1. Point and click
This is a method for triggering a single icon function or selecting a single mini-figure, vehicle, building, installation or location. Simply move the mouse pointer over an icon or one of the game elements listed above and left click the mouse button.

There are two modifier keys when selecting objects: <SHIFT> and <CTRL>. Holding down the <SHIFT> key and clicking with the left mouse button will **add** to the selection and holding down the <CTRL> key while clicking with the left mouse button will **subtract** from the selection.

The same modifier keys are also used to create and delete 'way-points' for a mini-figure or vehicle to move between. Way-points are described in detail later.

4.2. Click and drag
This method is used for selecting multiple mini-figures, vehicles, installations and buildings. By holding down the left mouse button, while the mouse pointer is over the Game View (7), and then dragging a box on the screen, the player selects all their objects within that box.

The player can also use the two modifier keys when selecting objects using the 'click and drag' method. Again, holding down the <SHIFT> key while dragging with the left mouse button will **add** to the selection and holding down the <CTRL> key while dragging with the left mouse button will **subtract** from the selection.

Both these selection methods can be used in conjunction with each other. For example the player would be able to make a selection using the click and drag method and edit that selection using the point and click method and vice versa.

4.3. Intelligent Selections
LEGO Rock Raiders will use an intelligent selection system to increase playability. For example if the player uses the click and drag method to select three mini-figures that are close to a building, it is possible that the building will also be selected. If the player's next command is 'move' then only the mini-figures will move. It is not necessary for the player to deselect the building before using the 'move' command.

4.4. Clearing a Selection
Clicking on the Game View (7) with the right mouse button will first clear any mouse function such as View Change. If the mouse pointer is in its generic arrow form then clicking with the right mouse button will clear any selection of units, installations or buildings.

5. Using Mini-Figures and Vehicles
When the player selects a mini-figure or a vehicle, they will be able to perform a variety of tasks determined by both the player and the capabilities of the object.

Most of these tasks will be centred on context sensitive mouse pointers that are all executed by the left mouse button.

For example, if the player were to select a large drilling vehicle with a 'pusher laser' upgrade, the following activities would be available by moving the mouse pointer around the Game View (7):
- Over a section of tunnel floor: Mouse pointer aquires MOVE TO command;
- Over a section of tunnel wall which is drillable: Mouse pointer changes to DRILL pointer command;
- Over a section of tunnel wall which is not drillable: Mouse pointer changes to CANNOT DRILL pointer;

- Over a section of non-drilled territory not connected to a tunnel system, or over lava or water, or over an existing building, vehicle or installation: Mouse pointer changes to CANNOT MOVE TO pointer;
- Over a Rock Monster or other enemy creature: Mouse pointer changes to the USE DEFENSIVE WEAPON pointer command.

If the player had chosen a small truck, then passing the mouse pointer over uncovered 'ore' or 'power crystals' would change it to the 'PICK UP' pointer command.

As you can see, all of these functions are available simply by selecting an object and then moving the mouse pointer around the screen. Also, as the mouse pointer is context sensitive, it undergoes graphical changes to inform the player of the currently available task. The player will be able to 'feel' their way around the Rock Raiders Universe intuitively and instinctively.

Designing the interface in this way will ensure that the game is immediately accessible to players right across the target range and beyond. The player will be able to navigate at least the first level without the need to use anything other than the methods described above.